

# CD23 (M-L233): sc-23923

## BACKGROUND

The human leukocyte differentiation antigen CD23 (FCE2) is a type II integral membrane glycoprotein that is expressed on mature B cells, monocytes, eosinophils, platelets and dendritic cells. In mouse, CD23 is found only on mature B cells. CD23 is a low affinity IgE receptor that mediates IgE-dependent cytotoxicity and phagocytosis by macrophages and eosinophils. CD23 associates as an oligomer where cooperative binding of at least two lectin domains is required for high affinity IgE binding to CD23. It may play a role in antigen presentation by B cells by interacting with CD40. CD23 has been shown to be associated with the Fyn tyrosine kinase. The truncated molecule can be secreted, then function as a potent mitogenic growth factor. ADAM8, ADAM15 and MDC-L catalyze ectodomain shedding of CD23. Intestinal cells coexpress CD23a and CD23b, and the two splice forms show different localizations in polarized cells.

## REFERENCES

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- Sugie, K., et al. 1991. Fyn tyrosine kinase associated with Fc  $\epsilon$  RII/CD23: possible multiple roles in lymphocyte activation. *Proc. Natl. Acad. Sci. USA* 88: 9132-9135.
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- Sutton, B., et al. 1993. The human IgE network. *Nature* 366: 421-428.
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- Yasui, T., et al. 1996. The roles of CD42 and CD23 in IgE regulation. *Adv. Exp. Med. Biol.* 409: 349-354.
- Cho, S.W., et al. 1997. B cell activation and Ig, especially IgE, production is inhibited by high CD23 levels *in vivo* and *in vitro*. *Cell. Immunol.* 10: 36-46.

## CHROMOSOMAL LOCATION

Genetic locus: FCER2 (human) mapping to 19p13.2.

## SOURCE

CD23 (M-L233) is a mouse monoclonal antibody raised against EBV-transformed B cell line.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD23 (M-L233) is available conjugated to either phycoerythrin (sc-23923 PE) or fluorescein (sc-23923 FITC), 200  $\mu$ g/ml, for IF, IHC(P) and FCM.

## APPLICATIONS

CD23 (M-L233) is recommended for detection of CD23 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for CD23 siRNA (h): sc-29976, CD23 shRNA Plasmid (h): sc-29976-SH and CD23 shRNA (h) Lentiviral Particles: sc-29976-V.

Molecular Weight of CD23 soluble form: 37 kDa.

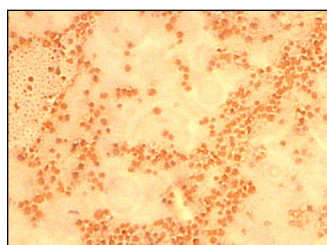
Molecular Weight of CD23 membrane form: 45 kDa.

## RECOMMENDED SUPPORT REAGENTS

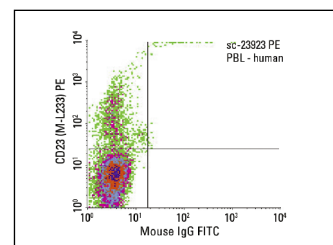
To ensure optimal results, the following support reagents are recommended:

1) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



CD23 (M-L233): sc-23923. Immunoperoxidase staining of formalin fixed human platelet smear showing membrane localization.



CD23 (M-L233) PE: sc-23923 PE. FCM analysis of human peripheral blood leukocytes. Quadrant markers were set based on the isotype control, normal mouse IgG $_1$ : sc-2866.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.